

## TWO SPECIES OF *PEDETONTUS* FROM AMAMI-Ô-SIMA (Thysanura : Machilidae)

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The present paper deals with the bristle-tails collected by Prof. T. Shirozu of Kyushu University, in Amami-Ô-sima of the Ryukyu Islands in July of 1955.

Two species are here described: Machilidae—*Pedetontus takahashii* Silvestri and *Pedetontus amamiensis* sp. nov.

*Pedetontus takahashii* was firstly described by Dr. Silvestri ('44) from this island, and it seems to be very common in the island. Concerning the structure of compound eyes it falls into a wide-eyed group, but the latter species *P. amamiensis* sp. nov. belongs to a long-eyed group, together with *P. formosanus* Silv. and *P. diversicornis* Silv., as shown in a key to Japanese species of *Pedetontus*.

In 1911, Dr. Silvestri described several new species of *Petrobius* from North America, placing them in a subgenus *Pedetontus*, which he distinguished from other species of *Petrobius* by (1) the absence of the characteristic rounded lobe on the subcoxa of the 8th abdominal segment, (2) the annulated gonapophysis (paramera), and by (3) the shortness of the penis. From Janetschek's opinion ('54) and my investigation, it may be right to add as generic characters of *Pedetontus* Silv. the following points: the presence of four-toothed mandibles, only one pair of paramera on the 9th abdominal segment, and a simple ovipositor unarmed with "Grabkrauen."

Before going further I wish to express my cordial thanks to Prof. Shirozu for sending the interesting material to me for identification.

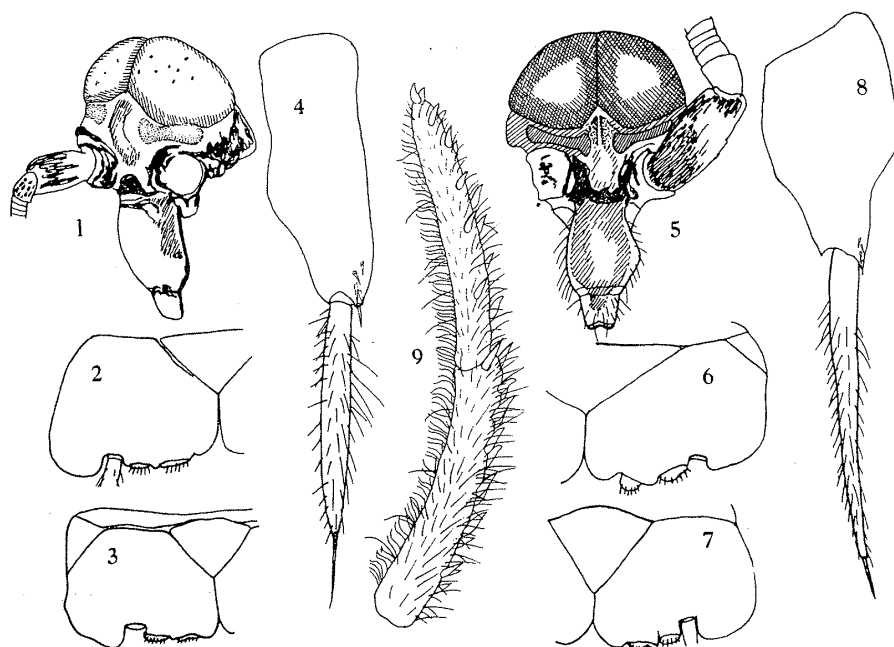
The specimens used for study have been preserved in my collection of the Biological Institute of Hirosaki University.

### *Pedetontus takahashii* Silvestri (Figs. 1-4)

*Pedetontus takahashii* Silvestri (1943), p. 288, figs. 1-12.

This species seems to be one of the common bristle-tails in Amami-Ô-sima Island. Seven females and one male collected by Prof. T. Shirozu in type locality, Naze were examined.

To judge from Silvestri's description and figures, the present specimens seem to be slightly different from the type in having spine-like setae on the 3rd tarsi and five (not four !) spines on the posterior part of the 9th subcoxa (Ab. IX.), and in the fact that maxillary palps of male are not so much stouter as those of

Figs. 1-4. *Pedetontus takahashii* Silvestri

1. Head, ♀. 2. 5th urosternum, ♀. 3. 5th urosternum, ♂.  
4. Subcoxa and stylet of Ab. IX, ♀.

Figs. 5-9. *Pedetontus amamiensis* sp. nov.

5. Head, ♀. 6. 5th urosternum, ♀. 7. 5th urosternum, ♂.  
8. Subcoxa and stylet of Ab. IX, ♀. 9. 6th and 7th segments  
of maxillary palp, ♂.

female. They, however, agree precisely with the original description in the essential specific characteristics: the form and size of oculi, lateral ocelli, and median plates of abdominal sternites; relative length of the 9th abdominal stylet to the 9th subcoxa.

Locality: Naze, Amami-Ō-sima. 7 ♀♀ (no. 1922a, one on slide and the others in spirit), 1 ♂ (no. 1922b, slide) 18. VII. '55. T. Shirozu leg.

***Pedetontus amamiensis* sp. nov. (Figs. 5-9)**

Dark brown, densely covered with blackish brown scales. Antenna uniformly dark brown, the flagellum included. Caudal filament and cerci also dark brown and scaly. Thorax strongly convexed.

Female:—Head: Oculi large and eminently convexed, touching medially for two-thirds of their depth. Paired ocelli red, sole-shaped: each ocellus about two-thirds the width of the corresponding ocellus. Antenna longer than the body; basal two segments scaly, proximal one of which is 2.5 times as long as broad; distal segment of flagellum with 25 to 30 subdivisions. Mandible four-toothed. Maxillary palp rather slender and pale brown, excepting white 1st, 5th, and 7th segments. Each segment of maxillary palp sparsely scaled and provided with

many long bristles along its underside, besides with normal short bristles; the 6th and 7th segments strongly curved outward, related as P. VI.: P. VII. = 0.86 : 0.83 in length; the 7th, 6th and the apex of 5th segments armed respectively with seven pairs, eight pairs and five of spines. Apical segment of labial palp pale brown, not distinctly darker than the other two segments. Thorax: Legs comparatively slender; femur, tibia, 1st and 3rd tarsi brownish. Underside of femur and tarsus with many slender whip-like hairs. Stylet of hind leg about two-thirds length of its subcoxa and with several long bristles on the outside. Abdomen: Median plate of sternite is a reversed triangle, whose base much longer than height.  $Sty_8$  (Ab. IX.) longer than  $Subc_9$  (Ab. IX.), related as 97:80 in length; apical seta relatively short, one-seventh as long as stylet. Inner posterior corner of  $Subc_9$  (Ab. IX.) protruded sharply and provided with four spines near the apex. Median filament longer than the body. Cerci nearly one-third as long as median filament. Ovipositor long, hardly surpasses the end of apical bristles of  $Sty_8$  (Ab. IX.); anterior gonapophysis with six to eight rows of bristles, a long apical bristle and apical organ (which is constructed of six peg-like processes and two papillae on the terminal subsegment).

Body 12.3 mm., width of thorax 3.2 mm., antenna 22.0 mm., median filament 19.5 mm., cercus 6.8 mm.

Male:—Smaller than female. Body color as in female. Head: Lateral ocelli more strongly constricted in the middle part than those of female. The 4th to 7th segments of maxillary palp covered densely with short subequal hairs. The 6th and 7th segments of maxillary palp curved outwards as in female and related in length as P. VI.: P. VII. = 0.97 : 0.86; the 7th, 6th and apex of 5th segments armed respectively with eight pairs, six pairs and two spines. Labial palp as in female. Thorax: Legs and their stylets as in female. Abdomen: Median plates of sternites are of wide reversed triangle in shape, but less wider than those of female.  $Sty_8$  (Ab. IX.) longer than  $Subc_9$  (Ab. IX.) as in female. Penis as long as paramera and extends backward to the three-fourths of  $Subc_9$  (Ab. IX.).

Locality: Sinmura, Amami-Ōshima. 1 ♀ (holotype no. 1921, slide), 21. VII. '55. T. Shirozu leg.; 1 ♂ (paratype no. 1920, slide), 19. VII. '55. T. Shirozu leg.

Remarks: The present species belongs to a long-eyed group of the genus *Pedetontus* Silv. together with *P. formosanus* and *P. diversicornis*. It is, however, easily distinguishable from *P. formosanus* in having not so long oculi as those of the latter and it differs also from *P. diversicornis* in the presence of the wider median plates of abdominal sternites and longer antennae.

#### Key to Japanese species of *Pedetontus* Silvestri, 1911

1. Boundary line between oculi longer than two-thirds of ocular length..... 2
- 1'. Boundary line between oculi as long as, or shorter than a half of ocular length ..... 7
2. Oculi normal, being at most as wide as long, or wider than long..... 3
- 2'. Oculi very large and strongly convexed, being longer than wide ..... 5
3. Oculi are as wide as long. Median plates small.  $Sty_8$  (Ab. IX.) nearly as long as  $Sbc_9$  (Ab. IX.) ..... *P. takahashii* Silv.
- 3'. Oculi are wider than long. Median plates large ..... 4

4.  $Sty_8$  (Ab. IX.) shorter than  $Sbc_9$  (Ab. IX.) (9:10). Terminal segment of maxillary palp of male provided with many long bristles. *P. nipponicus* (Silv.)
- 4'.  $Sty_8$  (Ab. IX.) much shorter than  $Sbc_9$  (Ab. IX.) (6:10). Terminal segment of maxillary palp of male not so ..... *P. isshikii* Silv.
5. Oculi slightly longer than wide ..... 6
- 5'. Oculi remarkably longer than wide. Median plate of Ab. V. is very wide (base: height  $\approx 2:1$ ) ..... *P. formosanus* Silv.
6. Median plate of Ab. V. not much wide (base: height  $\approx 4:3$ ). Antennae shorter than body ..... *P. diversicornis* Silv.
- 6'. Median plate of Ab. V. considerably wide (base: height  $\approx 2:1$ ). Antennae longer than body ..... *P. amamiensis* sp. nov.
7. Boundary line between oculi about a half of ocular length ..... 8
- 7'. Boundary line between oculi shorter than a half of ocular length. Oculi wider than long; paired ocelli very large ..... *P. sauteri* Silv.
8. Oculi wider than long. Median plate of Ab. V. rather wide (base: height  $\approx 6:5$ ) ..... *P. coreana* Silv.
- 8'. Oculi much wider than long. Median plate of Ab. V. narrower than long (base < height) ..... *P. okajimae* Silv.

## Literature cited

- Janetschek, H. 1954. Ueber Felsenspringer der Mittelmeerländer (Thys., Machilidae). Eos, 33(3/4): 163-314.
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## 樺太産キノコバエ科の2種

笹 川 満 広

1. *Mycomyia occultans* Winnertz

調査標本: 1 ♀, 豊原, 1922年7月15日, 江崎悌三採集. 分布: ヨーロッパ, 樺太.

2. *Rhymosia domestica* Meigen

調査標本: 1 ♀, 豊原, 1922年7月15日, 江崎悌三採集. 分布: ヨーロッパ, 樺太及び日本.

いずれも樺太から最初の記録である.

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